ITEM 7
SUP DOC 7

County of San Diego

GARY W. ERBECK
DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
LAND AND WATER QUALITY DIVISION
P.O. BOX 129261, SAN DIEGO, CA 92112-9261
(619) 338-2222 FAX (619) 338-2377
1-800-253-9933

RICHARD HAAS
ASSISTANT DIRECTOR

October 6, 2003

John H. Robertus, Executive Officer
Attn: Chiara Clemente
California Regional Water Quality Control Board, Region 9
9174 Sky Park Court, Suite 100
San Diego, CA 92123-4340

Dear Mr. Robertus:

COMMENTS FOR ORDER NO. R9-2003-0155, NPDES PERMIT CA0109347 WASTE DISCHARGE REQUIREMENTS FOR USMC CAMP PENDLETON DISCHARGE TO THE PACIFIC OCEAN VIA THE OCEANSIDE OCEAN OUTFALL

The Department of Environmental Health (DEH) is the local agency responsible for the protection of public health in ocean recreational waters. DEH often uses data from other agencies' beach water (a.k.a. 'surf zone') monitoring to ensure that ocean water quality meets state standards for body contact (California Health & Safety Code 115880). When monitoring indicates water quality does not meet state standards or if a release of untreated sewage may impact ocean waters, DEH makes notifications to protect public health.

With respect to Section IV, Receiving Water Monitoring, Order No. R9-2003-0155, DEH has the following comments:

1. In Section A. "Surf Zone Water Quality Monitoring", sampling frequency during the winter is "once every other week from November 1 through April 30 of each year." After consultation with the City of Oceanside, DEH believes that the specified frequency of monitoring during the winter months is adequate. Surf zone pollutants are primarily from urban runoff rather than from the Public Operated Treatment Works' (POTW's) ocean outfall discharge.

2. As stated in the above referenced order, "Monitoring must reflect conditions during all critical environmental periods." DEH has received and reviewed bacterial indicator data for over 3000 surf zone samples in San Diego County per year since 1999. Based upon this experience and knowledge of conditions that effect beach water quality DEH has developed Standard Operating Procedures (SOP's) for surf zone sample collection that should provide representative samples for most critical environmental periods and be most protective of public health. DEH's sampling SOP is consistent with those used by most, if not all, of the coastal water quality monitoring programs. Until new developments in science and bacterial indicator methodology become available to enhance our knowledge of temporal and spatial variability of indicators and their relationship with pathogens, DEH recommends using the

"STANDARD OPERATING PROCEDURES FOR THE COLLECTION OF WATER SAMPLES FOR BACTERIAL ANALYSIS FROM AND OCEAN AND BAY RECEIVING WATERS" attached herein.

If you have any questions, please call me at (619) 338-2201.

Sincerely,

MARK MCPHERSON, Chief
Land and Water Quality Division

MM:cc

Enclosure

County of San Diego

DEPARTMENT OF ENVIRONMENTAL HEALTH
LAND AND WATER QUALITY DIVISION

STANDARD OPERATING PROCEDURES FOR THE COLLECTION OF WATER SAMPLES FOR BACTERIAL ANALYSIS FROM AND OCEAN AND BAY RECEIVING WATERS.
(*This document format is adapted from the S.O.P. written by G. Williams, City of San Diego*).

Shoreline ('Surf Zone' in NPDES permits) sample collection

Equipment List

1. Rubber Gloves
2. Coolers (2)
3. Blue Ice
4. Sample Bottles
5. 4'-8' Sample Pole
6. Sampling Syringes
7. Sample Bottle Labels
8. Rubber Waders/Boots
9. Sharpie© Permanent Marker
10. Ballpoint Pen
11. Mechanical Pencil
12. Clipboard
13. Field Data Sheets
14. GPS Unit
15. Stop Watch
16. Flashlight
17. Tape Measure
18. Digital Camera
19. Site Maps
20. City Identification
21. Personal Business Cards
22. Lab Chain of Custody Sheets
23. Cellular Phone

I Introduction:

To properly determine bacteria concentrations in urban runoff and receiving waters, field and laboratory staff must collect and analyze samples in accordance with the following guidance documents.

- Standard operating procedures (S.O.P.) for the collection of water samples for bacterial analysis from ocean and bay receiving waters.
- Most Current Version of Standard Methods for Wastewater Analysis

General Standard Sampling Procedures:

Care should be taken to avoid direct, indirect, and cross contamination of the water, sample containers, coolers, and other tools used to collect water samples.

Do's

- Store / transport unused sample bottles in a sealed plastic bag.
- Always wear nitrile or latex gloves when handling samples.
- Use unopened autoclaved / sterilized 100 mL clear plastic bottles.
- Store / transfer receiving water and storm drain samples in separate coolers.

Do Not's

- Remove the cap until immediately prior to sampling.
- Touch the inside of the bottle or cap.
- Place the cap on the ground or in a pocket.
- Rinse the bottle.

Sampling Report and documentation:

The following pertinent information shall be recorded on all Chain of Custody Records / Sampling Reports. Labels with bottle numbers will be placed on EPA approved sterilized sample bottles prior to sample collection. Information shall be written using an indelible ink pen and in ones best handwriting.

i Bottle number
ii Location of Sample – name and Site ID
iii Distance (ft.) and Direction (facing water) from mixing zone (0 M) of outlet. If no outlet, leave blank.
iv Project Title
v Sampler – Record sampler's initials

The City of San Diego
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Location of Sample: _____
Sampler: _____ Sample #: _____
Date: _____ Time: _____ Description: ____
Remarks: _____

vi Date – Record date in the MM-DD-YY format
vii Time – Record using 24-hour clock
viii Observations– Record observations, including number and types of potential bacterial sources on beach within 25 yards, i.e., birds, children, rotting kelp, etc. At outlets, note if flow from outlet reaches mixing zone or dries in sand.

Updated 10-06-03

Shoreline Sample Collection– For samples collected from bay or ocean waters.

i. Time of Day. Target sampling time is 0700 – 1100 hrs.

ii. Tide. At flowing river or lagoon mouths, collect at least 3 hrs after high tide if possible.

iii. Fill out all sample bottle information on Chain of Custody documentation. Leave COC paperwork in dry place on shore.

iv. Place the bottle into the sampling pole hose clamp. If necessary, adjust tightness of hose clamp on bottle. Loosen the screw cap.

v. For samples at outlets. Starting at the mixing zone, walk along shoreline to specified distance from mixing zone. Use either measurement tool (rope or line cut to desired distance) or count large strides (approximately 3 feet long) to count as yards.

vi. For samples along open coast. Collect sample at routine location. If no identifiable landmarks, use GPS to locate position.

vii. Remove the screw cap, holding the open side of the cap facing the ground and turn the bottle so the opening is facing the ground. DO NOT PLACE THE CAP ON THE GROUND OR IN A POCKET

viii. The sampler will wade into the water to a depth of about 12 inches (middle of the shinbone). On an incoming wave (not outgoing wave), the sampler shall reach the bottle far out in front using the sample pole to ensure water collected does not contain sediment suspend while wading.

ix. Plunge the bottle into the water with the bottle opening facing downwards to a depth of approximately 4"-6" below the surface.

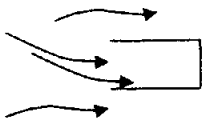
x. Turn the bottle such that the mouth of the bottle opening points slightly upwards, while slowly moving the bottle horizontally through the water (this eliminates cross contamination from sampling equipment or hands).

xi. When the bottle is nearly full tilt the bottle upwards while removing the bottle from the water.

xii. Decant as necessary to lower the water level to the shoulder of the bottle assuring that a small amount of air is left in the sample container prior to capping.

xiii. No surface residue, sediment, or debris shall be allowed to enter the sample bottle. If debris or sediment is evident in the bottle,

Wade into the water approximately 1 foot deep, incoming wave, sweeping motion 4-6 inches beneath the water.



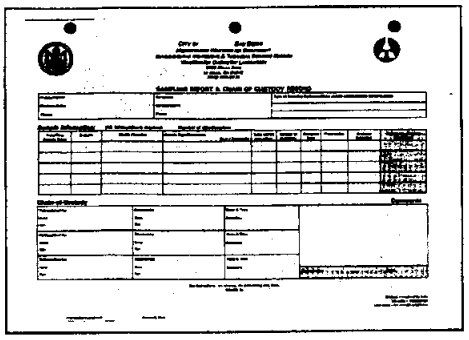
Direction of bottle for sample collection beneath surface

the sample will be discarded and the site will be re-sampled with a new, sterile bottle.

xiv. Replace the cap tightly.

xv. Place the sample into the cooler. All samples will be kept on ice (blue ice) in the dark from the time of sample collection until delivery to the analytical laboratory.

xvi. Samples will be delivered to the laboratory within 6 hours of sample collection.



Sampling Report and Chain of Custody Procedures – An official Chain of Custody Record/ Sampling Report shall be completed for all samples submitted to the laboratory.

i Record the appropriate sample information section.
ii Fill in any appropriate comments or special instructions to the laboratory staff.
iii Relinquish samples to the laboratory by legibly printing, signing, and dating the chain of custody section.
iv Retain copies of the Chain of Custody Record / Sampling Report for filing

Cooler/Blue Ice Clean-up – The coolers and Blue Ice shall be cleaned after delivery of the samples to the laboratory.

i Put on laboratory latex or nitrile gloves.
ii With a soapy sponge and warm water, wash and rinse the cooler and Blue Ice.
iii Dry the cooler and Blue Ice completely by wiping with paper towels.
iv Wipe down with a 1% benzylchronium chloride saturated towel to decontaminate.

Material Resupply – perform daily and/or as needed.

i Place Blue Ice into the sample storage freezer for future use.
ii Obtain additional Chain of Custody Record / Sampling Reports Obtain additional sample bottles as necessary.